

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A system for automatically discovering nodes on a network comprising:

an announcer logic configured to transmit an announcement packet, the announcement packet comprising a node address and a forward counter associated with each known node in a list, to all nodes in the list having a static type, if the forward counter is greater than zero;

a listener logic configured to receive ~~an~~ the announcement packet, further configured to add to the list of known nodes at least one new node, ~~wherein the~~ having a node address and ~~the~~ a forward counter ~~of the new node~~ corresponding to the announcement packet, wherein the new node has a discovered type; and

a forwarder logic configured to transmit the node address and the forward counter associated with the new node, to all known nodes in the list, if the forward counter is greater than zero.

2. (Previously Presented) The system of claim 1, wherein the announcer logic is further configured to transmit the node address and the forward counter using a unicast address.

3. (Previously Presented) The system of claim 1, wherein the forward counter is decremented upon receipt.

4. (Previously Presented) The system of claim 1, wherein the forward counter is decremented before transmission.

5. (Previously Presented) The system of claim 1, further comprising a network interface configured to transmit and receive data on the network.

6. (Previously Presented) The system of claim 5, wherein the announcer logic is further configured to transmit the node address and the forward counter via the network interface.

7. (Previously Presented) The system of claim 1, wherein the node address is an IP address.

8. (Previously Presented) The system of claim 1, wherein the announcement packet is an ICMP packet with type Echo Request.

9. (Currently Amended) A method for automatically discovering nodes on a network comprising:

initializing a first known node list;

transmitting to all known nodes in the first list, a first announcement packet, the first announcement packet comprising a node address and a forward counter associated with each known node, if the forward counter is greater than zero;

receiving from the network ~~an~~ second announcement packet;

adding to a second list of discovered nodes at least one new discovered node, where the discovered node comprises a node address and a forward counter corresponding to the announcement packet; and

transmitting to all known nodes in the first list and all discovered nodes in the second list, the node address and the forward counter associated with each known node, if the forward counter is greater than zero.

10. (Currently Amended) The method of ~~claim 8~~ claim 9, wherein transmitting onto the network to all known nodes further comprises transmitting the network node address and the forward counter using a unicast address.

11. (Currently Amended) The method of ~~claim 8~~ claim 9, wherein transmitting onto the network to all known nodes and all discovered nodes further comprises transmitting the node address and the forward counter using a unicast address.

12. (Currently Amended) The method of ~~claim 8~~ claim 9, wherein transmitting to all known nodes, a node address and a forward counter associated with each known node further comprises decrementing the forward counter before transmission.

13. (Currently Amended) The method of ~~claim 8~~ claim 9, further comprising:
detecting an unreachable node;
deleting from the list, responsive to the detecting, each node with a discovery source matching the unreachable node; and
announcing, to each node in the list, the deletion of each deleted node.

14. (Previously Presented) The method of claim 12, further comprising:
receiving a deletion announcement, wherein the deletion announcement comprises at least one node to be deleted; and
deleting from the list, responsive to the receiving, each node corresponding to the node to be deleted.

15. (Previously Presented) The method of claim 13, further comprising forwarding, to each node in the list, the node to be deleted.

16. (Currently Amended) A system for automatically discovering nodes on a network comprising:
a list of static nodes, wherein each static node comprises a node address and a forward counter;

an announcer logic configured to transmit the node address and the forward counter associated with each static node in the list, if the forward counter is greater than zero, to all static nodes;

a list of discovered nodes, where each discovered node comprises a node address and a forward counter;

a listener logic configured to receive an announcement packet, where the announcement packet comprises at least one node address and at least one forward counter, further configured to add to the list of discovered nodes at least one new discovered node corresponding to the node address and forward counter of the announcement packet; and

a forwarder logic configured to transmit via the network interface the node address and the forward counter associated with the new discovered node, if the forward counter is greater than zero, to all known nodes and to all discovered nodes, ~~wherein the forward counter is decremented before transmission.~~

17. (Previously Presented) The system of claim 16, wherein the announcer logic is further configured to transmit the node address and the forward counter using a unicast address.

18. (Previously Presented) The system of claim 16, wherein the forwarder logic is further configured to transmit the node address and the forward counter using a unicast address.

19. (Previously Presented) The system of claim 16, wherein the forward counter is decremented upon receipt.

20. (Previously Presented) The system of claim 16, wherein the forward counter is decremented before transmission.

21. (Previously Presented) The system of claim 16, further comprising a network interface configured to transmit and receive data on the network.

22. (Previously Presented) The system of claim 21, wherein the announcer logic is further configured to transmit the node address and the forward counter via the network interface.

23. (Previously Presented) The system of claim 21, wherein the forwarder logic is further configured to transmit the node address and the forward counter via the network interface.

24. (Previously Presented) The system of claim 21, wherein the listener logic is further configured to receive the announcement packet via the network interface.

25. (Previously Presented) The system of claim 16, wherein the node address is an IP address.

26. (Previously Presented) The system of claim 16, wherein the announcement packet is an ICMP packet with type Echo Request.